DOCUMENT RESUME

ED 065 515 TM 001 435

AUTHOR	Meier, John H.; And Others
TITLE	Administration, Scoring, and Interpretation Manual for the Individual Learning Disabilities Classroom Screening Instrument.
INSTITUTION	Colorado Univ., Denver. Medical Center.
PUB DATE	71
NOTE	81p.; Revised and enlarged edition of 1970 publication
AVAILABLE FROM	Dr. John H. Meier, Dr. Marion T. Giles, or Mr. Verl O. Cazier, JFK Child Development Center, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver, Colorado 80220 (no price quoted)
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	*Behavior Rating Scales; Bibliographies; Evaluation Methods; *Learning Disabilities; Manuals; Reference Materials; Remedial Instruction; Scoring; *Screening Tests; Student Evaluation; *Testing; *Test Interpretation
IDENTIFIERS	ILDCSI

ABSTRACT

This manual for administering, scoring, and interpreting the Individual Learning Disabilities Screening Instrument is introduced with the definition, prevalence, and etiology of learning disabilities. Next, a sample of the Individual Learning Disabilities Classroom Screening Instrument (ILDCSI) is provided. The administration and scoring of the ILDCSI are explained, and brief descriptions and interpretations of each of the eight individual learning disability categories described on the ILDCSI Scoring Form are given. An annotated list of tests and procedures most frequently used in the diagnosis of an individual learning disability is included, the items appearing under the following categories: intelligence, perceptual, neurological evaluation; pediatric evaluation; academic achievement and diagnostic tests; diagnostic language and concept formation tests; readiness and screening tests; and social competence test. Suggested activities, teaching methods, and preventive techniques are provided as aids for the teacher in applying remedial techniques. Included in these activities are those presented in the Facilitator's Handbook II. Episodes and Program Implementation for S.O.L.--System for Open Learning. An index is provided of the episodes and their subgroups or units. References and a selected bibliography are provided. (DB)

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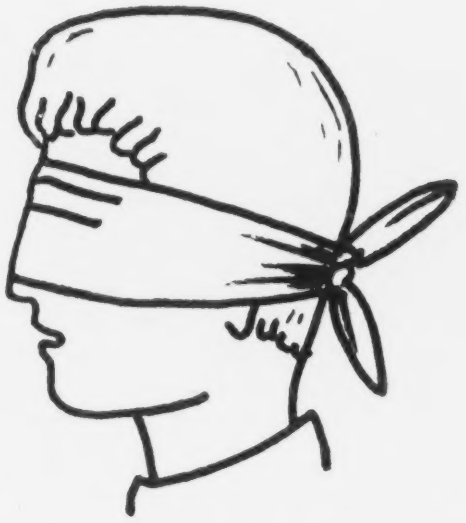
manual for the

INDIVIDUAL LEARNING DISABILITIES CLASSROOM SCREENING INSTRUMENT



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I. LEARNING DISABILITIES - DEFINITION, PREVALENCE, AND ETIOLOGY.

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TREATMENT OF LEARNING DISORDERS

University of Colorado School of Medicine
General Practice Postgraduate Review
Pediatrics 1/25/72 and 2/8/72

John H. Meier, Ph.D.

Definition: Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage (Chalfant, J. and Scheffelin, M., 1969, p. 148). (Italics ours)

Prevalence: Several national surveys and more detailed studies indicate that approximately 15 to 20 percent of children attending regular elementary schools have a learning disability as defined above (Meier, J., 1971, p. 15). One of the ironies of improved medical care for high risk infants is that an ever increasing number of these children survive to enroll in school where their mild to severe handicaps become manifest in school learning disabilities. Physicians, therefore, can expect to see more and more of these children and hopefully detect them before school entry.

Etiology: Sociopsychological Sources:

1. Quantitative and qualitative defects in teaching,
2. Deficiencies in cognitive stimulation,
3. Deficiencies in motivation -
   A. Associated with social pathology,
   B. Associated with psychopathology ("emotional").

Psychophysiological Sources:

1. General debility,
2. Sensory defects,
3. Intellectual defects,
4. Brain injury,
5. Specific (idiopathic) reading disability (Eisenberg, L. in Money, J. [Ed.], 1966, p. 8).

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II. SAMPLE OF INDIVIDUAL LEARNING DISABILITIES CALSSROOM SCREENING INSTRUMENT (ILDCSI).

INDIVIDUAL LEARNING DISABILITIES
CLASSROOM SCREENING INSTRUMENT

CHILD'S NAME _____ DATE OF BIRTH _____

ADDRESS _____ SEX _____ GRADE _____

_____ SCHOOL _____

EXAMINER _____ DATE OF SCREENING _____

DURATION CHILD HAS BEEN OBSERVED _____ YEARS _____MONTHS_____ WEEKS

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INDIVIDUAL LEARNING DISABILITIES
CLASSROOM SCREENING INSTRUMENT

The ILDCSI is utilized for the tentative identification of children with specific learning disabilities. Rate the child on each behavioral index by filling in the appropriate box in the rating column. Refer to manual for complete instructions and interpretation.

0 = Unobserved
1 = Average
2 = Moderate
3 = Severe

Item #	Rating: 0 Unobserved	1 Average	2 Moderate	3 Severe	Behavioral Indices	Comments
1					Holds book too close (6 inches or less).	
2					Avoids work requiring concentrated visual attention.	
3					Head forward or tilted to one side (more than 15 degrees) when reading or engaged in other visual tasks.	
4					Moves head or trunk excessively during visual tasks (instead of moving eyes).	
5					Uncontrollable rapid jumping of eyes.	
6					Rubs eyes often when reading or engaged in other visual tasks.	
7					Facial contortions with visual tasks (including squint).	

8		Unable to copy from chalk board (comment approximate distance).	
9		Unable to arrange letters or objects in a prescribed order.	
10		Unable to learn the sounds of letters (can't associate proper phoneme with its grapheme).	
11		Doesn't seem to listen to daily classroom instructions or directions (often asks to have them repeated whereas rest of class goes ahead.)	
12		Can't correctly recall oral directions (e.g., item 11 above) when asked to repeat them.	
13		Doesn't seem to comprehend spoken words (may recognize the words separately but not in connected speech).	
14		Can't name letters when they are pointed to.	
15		Can't pronouce the sounds of certain letters.	

16		Mild speech irregularities (can't pronouce most words common to his grade level).	
17		Immature speech patterns (still uses much baby talk).	
18		Lips remain apart when at rest (mouth breathing).	
19		Tongue thrust forward between teeth and often beyond lips (especially when using hands for writing, cutting, etc.)	
20		Unable to correctly repeat a 7-10 word statement spoken by the teacher (number of words he can repeat).	
21		Errors in own oral expression--confuses prepositions such as over, under, in, out, etc. ("put water under a fire to boil it").	
22		Transposes sounds in words (says "nabana" instead of "banana").	
23		Can't recite the days of the week in correct order.	

24		Underactive (seems lazy, couldn't care less) in classroom and on playground.	
25		Is slow to finish work (doesn't apply self, day-dreams a lot, falls to sleep in school). (Comment which or other.)	
26		Overactive (can't sit still in class - shakes or swings legs, fidgety). (Comment which or other.)	
27		Tense or disturbed (bites lip, needs to go to bath-room often, twists hair, high strung). (Comment which or other.)	
28		Occasional lapses of contact with classroom activities (has "spells" when hands and/ or body shakes, eyes blink, or don't seem to see).	
29		Very small for age (list height, weight, and age).	
30		Misses school frequently (list number of days per month).	
31		Poor gross motor coordination (comment specifically; e.g., can't skip or hop on one foot, etc.).	

32		Fingers tremble when hands held forward and arms supposed to be steady.	
33		Accidentally breaks and tears things (clumsy, awkward).	
34		Unusually short attention span for daily school work.	
35		Easily distracted from school work (can't concentrate with even the slightest disturbance from other students moving around or talking quietly). (List specific distractions.)	
36		Mistakes own left from right (confuses left-hand with right-hand side of paper).	
37		Often begins tasks with one hand and finishes with the other.	
38		Can't tie shoes and/or hold scissors properly (which or both).	
39		Loses way in school (gets turned around and doesn't know which way to go).	

40		Improper pencil grasp (clutched fist, held too tightly or presses so hard as to break lead and tear paper).	
41		Draws circles clockwise.	
42		Poor drawing of diamond compared with peers' drawings.	
43		Poor drawing of circle and tilted square compared with peers' drawings.	
44		Poor drawing of a person compared with peers' drawings.	
45		Poor handwriting compared with peers' writing.	
46		Reverses and/or rotates letters, numbers and words (writes "p" for "q", "saw" for "was", "2" for "7", "16" for "91") far more frequently than peers	
47		Does very poorly in written spelling tests compared with peers.	

48		Unable to learn the forms of letters (can't recognize letters when they are pointed to).	
49		Reverses and/or rotates letters, words, and numbers visually (reads "b" for "d", "u" for "n", "6" for "9") far more frequently than most peers.	
50		Reverses and/or rotates sounds and numbers presented auditorily (reads "tac" for "cat", "left" for "felt", "327" for "723") far more frequently than most peers.	
51		Confuses left and right directionalities when not associated with own self.	
52		Loses place more than once while reading aloud for one minute.	
53		Omits words while reading grade-level material aloud (omits more than one out of every ten).	
54		Reads silently or aloud far more slowly than peers (word by word while reading aloud).	
55		Points at words while reading silently or aloud.	

56		Substitutes words which distort meaning ("when" for "where").	
57		Can't sound out or "unlock" words.	
58		Can read orally but does not comprehend the meaning of written grade-level words (word-caller).	
59		Can't follow written directions, which most peers can follow, when read orally or silently (which or both).	
60		Reading ability at least 3/4 of a year below most peers.	
61		Tells barren or incoherent stories (they don't even make sense to peers).	
62		Has trouble telling time.	
63		Doesn't understand the calendar (what day follows Wednesday, etc.)	

64		Difficulty with arithmetic (e.g., can't determine what number follows 8 or 16; may begin to add in the middle of a subtraction problem).	
65		Cannot apply the classroom or school regulations to own behavior whereas peers can.	
66		Excessive inconsistency in quality of performance from day to day or even hour to hour.	
67		Has trouble organizing written work (seems scatter-brained, confused).	
68		Seems very bright in many ways but still does poorly in school work.	
69		Repeats the same behavior over and over.	
70		Doesn't get along with most peers (can't make or keep friends, is picked on, wants to change rules, poor loser).	
71		Shows excessive affection toward peers or adults in school or on playground.	

72		Unusually aggressive toward peers or adults in school or playground.	
73		Unusually shy or withdrawn.	
74		Cries easily and often for no apparent reason.	
75		Afraid of many things which most peers don't fear.	
76		Explodes for no apparent reason.	
77		Demands unusual amount of attention during regular classroom activities.	
78		Seems quite immature (doesn't act his/her age).	
79		Seems insensitive to others' feelings.	

80 ☐

Seems confused when using visual, auditory and/or tactile inputs simultaneously (e.g., oral reading and/or written spelling.)

PUPIL PRODUCTIONS

NAME
(last name first) _____

BOY GIRL
(circle one)

TODAY'S DATE _____

BIRTHDAY _____

AGE _____

WHAT I LIKE MOST ABOUT SCHOOL

_____

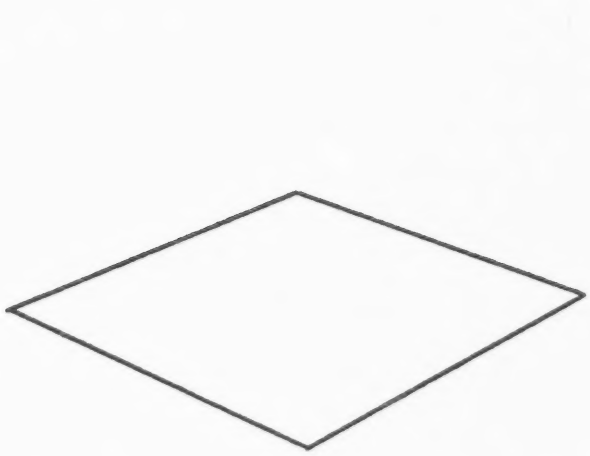
COPY THIS SENTENCE: I SAW A FUNNY CLOWN.

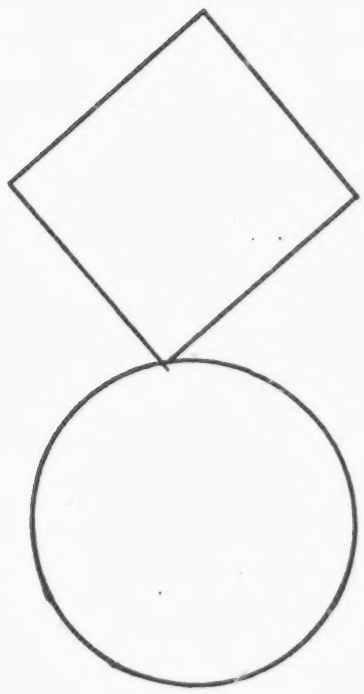
_____

SPELLING

1.	_____	8.	_____	15.	_____
2.	_____	9.	_____	16.	_____
3.	_____	10.	_____	17.	_____
4.	_____	11.	_____	18.	_____
5.	_____	12.	_____	19.	_____
6.	_____	13.	_____	20.	_____
7.	_____	14.	_____		

TOP





RELATED INFORMATION

I. Tests (include all available data):

	Name of Test	Form	Date Given	Score(s)
Individual I. Q.				
Group I. Q.				
Achievement Test				
Reading Readiness Test				

II. Has child been retained? Yes No Once Twice
Reason(s) given, if any:

III. Does child have any physical handicaps (e.g., no front teeth, wears hearing aid, etc.) which might impair his listening, seeing, speaking, or writing?

IV. Parental Occupation
Father: Mother:

V. Birth Order _____

Number of brothers _____ Ages _____

Number of sisters _____ Ages _____

Do school records indicate learning disabilities in any of the siblings?
Yes No

If yes, please elaborate:

VI. Which hand does child prefer to use? Left Right Neither
Which foot does child kick a ball with most often? Left Right
Which eye is dominant? Near Vision: Left Right
Far Vision: Left Right

VII. Other comments related to child's learning difficulties and behaviors: e.g., eating habits, including recent changes; sleeping patterns; overly restless or wakeful in the night; bed wetting.

III. ADMINISTRATION OF ILDCSI.

ADMINISTRATION OF THE ILDCSI

Use a separate ILDCSI for each child having difficulty learning. Fill out all information on the front cover.

Pupil Productions

In order to be taken into consideration on items 42, 43, and 44 of the ILDCSI, the Pupil Productions section should be administered first to each child who is having unusual difficulty learning. Choose a convenient time for the completion of the Pupil Productions sections; allow twenty-five minutes of uninterrupted time for these sections. Before proceeding, read the rest of these instructions in order to be familiar with the entire task. Have the child use a pencil for this task. In no case allow a child to start over on an unused form.

On the first page of the Pupil Productions section you should tell each child to write his name, age, birthday, today's date, and a statement about what he likes about school. Ask him to copy the sentence, I saw a funny clown, and to circle his sex. You should read each item to the child but not supply any additional information, spellings or explanations. If you are asked for help just say, "I have read each word to you and cannot tell you any more. Do your best to figure it out." You may repeat the directions once if necessary. Allow sufficient time for this to be completed (eight minutes should be ample).

If the child has not had sufficient academic exposure to be able to do this section, make a note of explanation. If he has, then go on to the spelling words. Say, "I am going to say some words which you should write on the lines."

You pronounce each word, say the sentence in which it occurs, then pronounce it once again. Do not repeat this sequence. Allow about ten minutes for this section.

SPELLING LIST

1.	cat	the cat has a long tail	cat
2.	in	we are in the room	in
3.	go	children go to school	go
4.	man	the man works all day	man
5.	will	they will come for you	will
6.	was	Jack was a cowboy	was
7.	dog	the dog went home	dog
8.	make	I can make a square	make
9.	cut	mother cut the cake	cut
10.	dress	the dress fits well	dress
11.	run	Bob can run fast	run
12.	say	please say it slowly	say
13.	him	we saw him in town	him
14.	cook	we cook our own dinner	cook
15.	wall	the old wall broke down	wall
16.	light	the light is bright	light
17.	left	his left arm hurts	left
18.	must	I must go now	must
19.	train	the train was crowded	train
20.	watch	my watch is fast	watch

On the second page each child is asked to draw both designs in the space to the right when the word TOP is in the correct position (this requires rotation of the page 90° clockwise before beginning). You say, "Now, on the next page you are to copy designs just like the ones on the paper. Be sure that the word TOP is in the correct place. Make your designs just like th ones that are there. Use the space on the right for your designs."

You may repeat these directions once. If you see a child using the space to the left of the examples, allow him to do so without correction. Allow sufficient time (about three minutes) for these to be completed.

On the third page, which is simply a blank sheet of paper, the child is asked to draw a person. The drawing is to be completely freehand with no model or hints given. You say, "And now on the last blank page you are to draw a picture of a person. Be sure to draw a whole person, not just the head. Do the best you can." You may repeat these directions once. Allow about five minutes for this task.

Then say, "Print your name on the bottom left-hand corner of your drawing of a person." You may repeat this direction once. Allow the child to put his name wherever he chooses after this direction has been given. When he has finished putting his name on his drawing, collect all of the materials.

Behavioral Indices

Carefully read each item and rate the child's behavior on that item before going to the next item. Use your knowledge of the performance of normal children his age in order to make the comparative ratings, except for items Numbered 42, 43 and 44. Rate the child with a "3" if the item describes the child's usual behavior which in your judgment is a severe disorder. Rate him with a "2" if the behavior is typical of the child but of a moderate degree.

Rate him with a "1" if the behavior seldom occurs and does not seem to be a noteworthy disorder. Rate him with a "0" if the item describes a behavior that you either have not noticed or have not had the opportunity to observe. Please write in the "Comments" column any statement that you feel is necessary in order to clarify or justify any one of the four ratings.

Related Information

Complete the related information sheet with whatever information you have or can gather from the pupil's records. If percentile rank is not given on the achievement or readiness tests, write in the scores given and label them appropriately. If more than one score is reported, list them all with the appropriate dates, using the back of the sheet if necessary. If no score or information is available for a particular item, leave the space blank.

IV. SCORING OF ILDCSI.

SCORING THE ILDCSI

SCORING OF SPELLING (Item 47): If spelling test is given at the end of first grade or beginning of second grade, child rates a 0 if he spells eight or more words correctly, and he rates a 3 if he spells less than four words correctly. If the test is given at the end of the second grade or beginning of third grade, the child rates a 0 if he spells fifteen or more words correctly and he rates a 3 if he spells less than ten words correctly.

SCORING OF DESIGNS (Item 42, Vertical Diamond and Item 43, Circle and Tilted Square): If designs are copied correctly they rate a 0; if they are incorrectly copied, they rate a 3.

To rate a 0, the Vertical Diamond must have:

1) four good corners,
2) opposing corners (especially horizontal),
3) only slight "dog-ears" on any corner,
4) no "kite" shape,
5) both acute angles must be 60^{o} or less.

To rate a 0, the Circle and Tilted Square must have:

1) a four-cornered square and a circle,
2) opposite corners within 10^{o} of vertical and horizontal orientation,
3) the square touching the circle with closed corner,
4) little or no gap or overlap of forms,
5) contact of square's corner within middle 1/3 of circle,
6) relatively equal size of the circle and the square (Beery, 1967,pp.).

SCORING OF DRAW-A-PERSON (Item 44): If drawing qualifies for 22 or more points, rate it with a 0; if it qualifies for less than 15 points, rate it with a 3; and if it qualifies for 15 to 22 points, rate it with a 2. Points are awarded for items 1 through 40 listed on the following page.

SCORING DRAW-A-MAN (ITEM #44)
(Simplified version from Goodenough, 1926)

1_____ Head present.
2_____ Legs present.
3_____ Arms present.
4_____ Trunk present.
5_____ Length of trunk greater than breadth.
6_____ Shoulders indicated.
7_____ Both arms and legs attached to trunk.
8_____ Legs attached to trunk; arms attached to trunk at the correct point.
9_____ Neck present.
10_____ Outline of neck continuous with that of head, or trunk, or of both.
11_____ Eyes present.
12_____ Nose present.
13_____ Mouth present.
14_____ Both nose and mouth shown in two dimensions; two lips shown.
15_____ Nostrils indicated.
16_____ Hair shown.
17_____ Hair present on more than the circumference of the head, and non-transparent; method of representation better than a scribble.
18_____ Clothing present.
19_____ Two articles of clothing non-transparent.
20_____ Entire drawing free from transparencies when both sleeves and trousers or dress are shown.
21_____ Four or more articles of clothing definitely indicated.
22_____ Costume complete, without incongruities, i.e., everything is appropriate to type costume.
23_____ Fingers shown.
24_____ Correct number of fingers shown.
25_____ Fingers shown in two dimensions, length greater than breadth, and no angles between them greater than 180 degrees.
26_____ Opposition of thumb shown--clearly differentiated from fingers.
27_____ Hand shown, as distinct from fingers or arms.
28_____ Arm joint shown, -- either elbow, shoulder, or both.
29_____ Leg joint shown, -- either knee, hip, or both.
30_____ Head in proportion, -- about one-fourth trunk size.
31_____ Arms in proportion, -- about equal to trunk in length.
32_____ Legs in proportion, -- at least as long as trunk but not twice as long and thinner than trunk.
33_____ Feet present.
34_____ Both arms and legs shown in two dimensions.
35_____ Motor coordination -- firm, sure lines showing that the pencil was under control.
36_____ Ears present.
37_____ Ears present in correct position and proportion.
38_____ Eye detail. Brow or lashes shown.
39_____ Eye detail. Pupil shown.
40_____ Both chin and forehead shown.

NOTE: It should be noted that for simplicity the recommended scoring for most of the Pupil Productions is 0 or 3, which represents two extremes. If the teacher wishes to grade the pupil productions with a 2 when an item is almost passed, this is permissible.

INSTRUCTIONS FOR SCORING THE ILDCSI

Attached to each ILDCSI is its own Scoring Form (see page 8 for an example). Transfer the rating for each item in the ILDCSI Behavior Checklist to the appropriate square ☐ on the Scoring Form by putting the number score in the square, thus [0], [2], etc. Slide the marked Scoring Form under each category overlay (cutoff pages A through H immediately following) being careful to set the three dots on each category overlay directly over the three dots on the Scoring Form. Transfer the 0, 1, 2, and 3 rating totals to the appropriate columns and rows in the scoring box at the right-hand bottom of the ILDCSI Scoring Form. For example, category overlay A on the next page has thirty-seven numbers on it; the Scoring Form for a given child might have numbers other than zeroes or ones in thirty of the thirty-seven boxes for this category. The zeroes and ones are to be disregarded. If 9 of the items have 3's, enter 27 in top row of column b. If 13 of the items have 2's, enter 26 in top row of column c. Enter 53 in top row of column d and 53 ÷ 111 or .48 in top row of column e. This is converted to 48% for column f. Each additional category overlay is to be similarly scored. These weighted percents in column f give an indication of the relative proportions of various categories of disability in any given child.

The ILDCSI should not be used in place of diagnostic instruments but rather as a screening guide whereby children manifesting behavior patterns indicative of an Individual Learning Disability may be referred for more refined medical, psychological, and/or educational testing and remediation. Teachers utilizing the ILDCSI are able tentatively to identify, more accurately to describe by observable learning behaviors, and more appropriately to refer and/or to remediate children with Individual Learning Disabilities.

ILDCSI SCORING FORM

1 ☐	11 ☐	21 ☐	31 ☐	41 ☐	51 ☐	61 ☐	71 ☐
2 ☐	12 ☐	22 ☐	32 ☐	42 ☐	52 ☐	62 ☐	72 ☐
3 ☐	13 ☐	23 ☐	33 ☐	43 ☐	53 ☐	63 ☐	73 ☐
4 ☐	14 ☐	24 ☐	34 ☐	44 ☐	54 ☐	64 ☐	74 ☐
5 ☐	15 ☐	25 ☐	35 ☐	45 ☐	55 ☐	65 ☐	75 ☐
6 ☐	16 ☐	26 ☐	36 ☐	46 ☐	56 ☐	66 ☐	76 ☐
7 ☐	17 ☐	27 ☐	37 ☐	47 ☐	57 ☐	67 ☐	77 ☐
8 ☐	18 ☐	28 ☐	38 ☐	48 ☐	58 ☐	68 ☐	78 ☐
9 ☐	19 ☐	29 ☐	39 ☐	49 ☐	59 ☐	69 ☐	79 ☐
10 ☐	20 ☐	30 ☐	40 ☐	50 ☐	60 ☐	70 ☐	80 ☐

Refer to ILDCSI Manual for scoring instructions and interpretation.

ILDCSI CATEGORIES

A. High Risk Disability Case

B. Auditory Perception Disability

C. Neurological Involvement

D. Visual Acuity Disability

E. Visual Perception Disability

F. Spatial Orientation Disability

G. Sequential Memory (Visual and/or Auditory) Disability

H. Social Emotional Involvement

	Possible Total	#3 Ratings X3	#2 Ratings X3	Total Columns b & c	Column d divided by Column a	Column e X 100(%)
	111					
	36					
	72					
	30					
	36					
	24					
	33					
	69					
	a	b	c	d	e	f

A. HIGH RISK DISABILITY CASE.

	11						
2	12			42	52	62	
				43	53		
			34	44	54	64	
	15	25	35	45	55	65	
		26	36	46	56	66	
		27		47	57	67	77
					58	68	78
				49	59	69	
10	20				60		

B. AUDITORY PERCEPTION DISABILITY

11

12

13

15

16

17

57

58

59

10 50 60

B

C. NEUROLOGICAL INVOLVEMENT

*Record if left-handed child draws circle counter-clockwise or right-handed child draws circle clockwise.	31	41*	61
	32	42	62
	33	43	63
		44	64
		45	
	36		
	37		67
18	28	38	
19	29	39	69
	30		

80

C

D. VISUAL ACUITY DISABILITY

1

2

3

4

5

6

7

8

9

10

E. VISUAL PERCEPTION DISABILITY

51

52

33 53

14 54

55

46 56

48

49

60

E

F. SPATIAL ORIENTATION DISABILITY

21

22

33

14

36 46

39 49

f

G. SEQUENTIAL MEMORY (AUDITORY AND/OR VISUAL) DISABILITY

11

12

23

63

64

48 58 68

9

59

20

G

H. SOCIAL-EMOTIONAL INVOLVEMENT

61 71

72

73

24 34 44 74

25 35 65 75

26 66 76

27 77

68 78

79

40 70 80

H

V. INTERPRETATION OF ILDCSI RESULTS.

INTERPRETATION OF ILDCSI CATEGORIES

Educators of exceptional children have expressed disenchantment with traditional systems of classifying handicapped children because the traditional psychological and medical evaluations give few if any practical clues regarding the direction which grouping and learning experiences should take in the regular classroom. The ILDCSI attempts to bridge this gap by enabling the teacher to categorize the child's individual learning disabilities in terms of his manifest classroom behavior and subsequently to match appropriate learning activities to ameliorate the condition.

The differential diagnosis and management of individual learning disabilities often is a complex problem (Meier, 1971) and may require the skills and knowledge of professionals and many disciplines (Meier & Martin, 1970). The following rather gross and tentative interpretations of the ILDCSI categories more clearly delineate the individual learning disabilities and serve as a point of departure for a more thorough diagnostic workup with suggested tests and techniques or, in those cases where this is deemed unnecessary or unavailable, the initiation of remediation can be based upon them.

The weighted percentages in column f of the ILDCSI Scoring Form are indicative of the severity of disorder in any given Category (rows A through H). Those Categories with the highest weighted percentages should be attended to first. Generally speaking, any ILDCSI Category rated 25% or higher should be specifically remediated in the classroom; any Category rated 75% or higher warrants a referral for further differential diagnosis since it is probably quite complicated. A compendium of classroom remediation techniques keyed to the Categories is in preparation as part of a total instructional system (Meier, 1971, and Irish and Giles, 1969).

The following sections contain brief descriptions and interpretations of each of the eight individual learning disability categories described on the ILDCSI Scoring Form. Several of the instruments or procedures which are available for making more sophisticated differential diagnoses are also mentioned. A supplementary manual of remedial and preventive techniques keyed to the ILDCSI is in preparation.

A. HIGH RISK DISABILITY CASE

Due to the high frequency of these thirty-seven conditions in individual learning disability cases, the presence of even a small number of these items probably indicates an Individual Learning Disability case of some degree. The greater the percentage in column f, the more severe would be the general disability and the higher is the risk that the child will continue to fail in school with conventional instruction. The Wide Range Achievement Test, abbr. WRAT, (Jastak & Jastak, 1965) yields a quick overall estimate of a child's achievement in word recognition, spelling, and arithmetic. Other more thorough techniques include those by Baker (1967), Beaty, Madden & Gardner (1966), Durrell (1955), Gates & McKillop (1962), and Spache (1963).

B. AUDITORY PERCEPTION DISABILITY

Items 15, 16, and 17 may be attributed to a physical speech defect, and should be referred to a speech pathologist for evaluation. Instruments for a better differential diagnosis include: Audiometric Testing, Articulation Testing (Templin-Darley, 1960), Auditory Discrimination Testing (Wepman, 1958), and parts of the Illinois Test of Psycholinguistic Abilities, abbr. ITPA (McCarthy and Kirk, 1969).

All too often auditory discrimination is misconstrued to mean auditory perception. Auditory discrimination is only one phase of auditory perception

which includes auditory awareness, auditory focus, auditory figure-background, auditory discrimination, auditory memory, auditory scanning, auditory integration and synthesis, and auditory feedback. Auditory perception is the ability to comprehend and relate auditory stimuli, with appropriate meaning and response, to stored auditory experiences which are retrieved through instantaneous scanning of the auditory memory. It is the meaningful interpretation and comprehension of heard sounds.

Contrary to popular belief, auditory-perceptual impairments are not the result of damage to the ear, which might cause sounds to be faint, dull, or blurred. It seems as though parts of some sound waves are held back so that the auditory configuration patterns which are flashed on the brain screen are difficult to recognize or are unfamiliar and easily mistaken for other sounds in the environment. Perhaps one ear gets the message slightly before the other, causing a kind of auditory asynchrony or auditory astigmatism, as it were. It might well be that this type of impairment results in only intermittent auditory fusion and incoherent sound messages.

Auditory-perceptual problems may permit a child to "listen" only to parts of sound patterns, and heard speech is perceived to sound like mumbling or muffled TV or radio that is filled with static. Therefore, the auditory configuration of words spoken appears fairly similar or identical. Some sound patterns fail to register at all, so difficulty in following directions is a natural way of behaving for the child. Because he has a poor auditory feedback mechanism, he may be unaware of the fact that he has not received the message properly.

Moreover, the child with this problem may so thoroughly incorporate inadequate and incorrect auditory perceptions of words, phrases, and sentences

that consistent negative reinforcement of error becomes a difficult chain to break. The computer sciences have an acronym, GIGO, which stands for Garbage In-Garbage Out; in language development garbled speech in is destined to result in garbled speech out. Many children appear to "tune out" or "turn off" their hearing when they cannot readily understand what they hear. By "tuning out" they avoid the challenge, the effort, and the possible frustration of trying to comprehend.

C. NEUROLOGICAL INVOLVEMENT

This is a multi-disciplinary area and may require the expertise of the behavioral or medical sciences, depending upon the items checked.

Items 33, 42, 43, 44, and 45 indicate a visual-motor dysfunction. Some instruments for better differential diagnosis include: Developmental Test of Visual-Motor Integration, abbr. VMI (Beery, 1967), Developmental Test of Visual Perception, abbr. DTVP (Frostig, 1966), and Surveys to Basic Learning Disabilities, abbr. SBLD (Valett, 1968).

Items 30 and 61 may indicate psychological problems (social-emotional) and, if severe, should be referred to a school or clinical psychologist for accurate diagnosis and appropriate treatment.

Items 31, 32, 36, 37, and 38 indicate body motoric problems; the Purdue Perceptual-Motor Survey, abbr. PPMS (Roach and Kephart, 1966), and the SBLD may help to pinpoint the nature of the problem.

Items 39 and 41 indicate problems in spatial orientation, laterality and directionality - DTVP, PPMS, and Southern California Test Battery, abbr. SCTB (Ayres, 1966).

Items 63 and 64 deal with sequential memory - the ITPA is helpful in sorting this out.

Items 18, 19, 28, 29, 62, and 67 probably indicate neurological involvement and should be referred to a physician.

Item 68 is a common description of an underachieving child (cf. film entitled "Bright Boy Bad Scholar").

Clinical pattern analysis of the Wechsler Intelligence Scale for Children, abbr. WISC (Wechsler, 1955). The Visual-Motor Gestalt Test (Bender, 1938), Standard Neurological Evaluation (Ozer, 1966), and the Revised Halstead Impairment Index (Reitan, 1964) are especially useful in corroborating the diagnosis of minimal cerebral dysfunction or damage.

The term "neurological involvement" as used herein refers to the fact that some perceptual or learning disabilities are due to a dysfunction of the central nervous system rather than to emotional or environmental causes (see Meier, 1971, for more detailed discussion of definition, incidence, and characteristics of Individual Learning Disabilities). Normal and superior learning ability is a function of a well-developed nervous system and some individual learning disabilities are due, at least in part, to an underdeveloped, immature, or slightly damaged nervous system.

D. VISUAL ACUITY DISABILITY

Visual acuity may have the initial check done with a Snellen chart; however, if there is any doubt about the child's ability to see normally well (with glasses if necessary), the child should be referred to an optometrist or an ophthalmologist.

Even though visual acuity is adequate, a very close check of visual perception (Category E) should be made.

E. VISUAL PERCEPTION DISABILITY

Item 33 refers to probable neurological dysfunction (Category C) and should be referred to a physician.

Items 46 and 49 refer to visual perception in terms of spatial orientation and may be related to Category F.

The remaining items pertain to visual perception as defined below. Instruments for greater sophistication in diagnosis include the DTVP, the PPMS, the SCTB, and parts of the ITPA.

Visual perception, as the term is used herein, is the ability to recognize and discriminate visual stimuli and to interpret those stimuli by associating them with previous experiences. Visual perception is not merely the ability to see accurately; interpretation of visual stimuli occurs in the brain, not in the eyes.

Proficiency in visual perception helps children to learn to read, write, spell, calculate, and to perform most of the other skills necessary for success in school work. Yet a great many children enter school inadequately prepared to perform the visual perceptual tasks required of them.

The normal period of maximum visual perceptual development occurs from about 3½ to 7½ years of age. But in practically every classroom there are children who lag in their visual perceptual development. They are the children who in kindergarten or first grade -- or even later -- have not reached the visual perceptual maturity necessary to perform the day-in and day-out school tasks demanded in the curriculum for their grade. This may be due to a basic neurological immaturity or developmental disability.

A child with a visual perceptual lag is indeed handicapped. He has difficulty in recognizing objects and their relationships to each other in

space, and since his world is perceived in a distorted fashion, it appears to him unstable and unpredictable. He is likely to be clumsy in his performance of everyday tasks and inept at sports and games. Above all, the distortion and confusion with which he perceives visual symbols makes academic learning very difficult, if not impossible, no matter how intelligent he is or how hard he tries using conventional instructional methods and materials.

Developmental deficits in both visual and auditory perception subject a child to emotional stress. The child who discovers that he is unable to perform as well as his peers and who becomes aware of the disappointments of his parents and teachers almost inevitably becomes confused, angry, inattentive, and ashamed. Character and behavior disorders commonly result and may become ingrained if no remedial action is undertaken early in his school career.

F. SPATIAL ORIENTATION DISABILITY

Instruments for greater sophistication in diagnosis include DTVP, PPMS, and SCTB.

Spatial orientation is the ability of an observer to perceive the position of two or more objects in relation to himself and in relation to each other. This ability develops later than, and grows out of, the simpler one of perceiving his own position in space. Perception of position in space may be defined as perception of the relationship of an object to the observer. A person is the center of his own spatial world and perceives objects as being behind, in front, above, below, or to the side of himself.

A child with faulty perception of position in space is handicapped in many ways. His world is distorted and disorganized, he is frequently clumsy and hesitant in his movements, and he has difficulty understanding what is meant by the words designating spatial position, such as in, out, up, down, in front,

behind, left, right. In distinction to visual or auditory perception disabilities, these difficulties may be due to disorders in concept formation, association, and related higher order cognitive functions. His difficulties become more apparent when he is faced with his first academic tasks, because letters, words, phrases, numbers, and pictures appear distorted to him and thus confuse him. To give the simplest and most frequently encountered examples, a child with difficulties in perceiving the proper position of an object in relation to himself or other objects is likely to get lost or "turned around" in unfamiliar (even familiar) places and to perceive b as d, p as q, on as no, saw as was, 24 as 42, and so on. This, of course, makes it frustrating and difficult, if not impossible, for the child to learn to read, write, spell, and do arithmetic.

G. SEQUENTIAL MEMORY (VISUAL AND/OR AUDITORY) DISABILITY

An instrument for greater sophistication in diagnosis is the ITPA.

Sequential memory herein refers to the ability to relate in their current order events which follow each other in time. Items 9, 11, 12, 20, 23, 48, 58, 59, 63, 64, and 68 refer to learning disorders often caused by faulty visual and/or auditory sequential memory. This is the ability to perceive visual or auditory stimuli in sequence and to be able to hold that impression long enough to repeat it accurately. This ability also involves the rehearsing or retention of parts already presented while entertaining additional stimuli.

H. SOCIAL-EMOTIONAL INVOLVEMENT

If most of these items are checked with few or no other behavioral indices checked, it is likely that the behavioral symptoms are due to environmental deprivation and neurological dysfunction and/or primary emotional dis-

turbance rather than due to the stress brought on by academic failure. A physician should be involved to at least rule out neurological problems. A school nurse or social worker could assist in establishing whether or not any home background factors are contributing to the behavior disorders. If other behaviors are checked also, it is probably an indication that the symptoms of emotional stress are secondary and brought about by individual learning disabilities which cause general or specific academic failure and its attendant frustration and embarrassment.

Various disciplines tend to see this group of children in terms of their own frames-of-reference: the psychologist sees a behavior disorder; the psychiatrist, an ego deficiency; the physician, a developmental disability; the speech therapist, a communication disorder; and the educator, a learning disability. These esoteric semantics do not bring about maximum understanding of the child's problem and, instead of yielding practical approaches for remediation, they often lead to a paralysis of analysis or hardening of the categories. This ILDCSI is designed to help the classroom teacher describe a child by a cluster of observable classroom behaviors and take some specific empirically validated remedial steps. Although the ILDCSI is still embryonic in its development, it is submitted as something better than the vacuum which now exists and, as additional data are accumulated with its use, a refined and more mature instrument can be generated.

VI. DIFFERENTIAL DIAGNOSIS - ANNOTATED LIST OF PROCEDURES.

DIAGNOSTIC TESTS AND PROCEDURES:

Since diagnosis of an individual learning disability is a complex and interdisciplinary task of ruling in certain primary factors and ruling out other peripheral or secondary ones (Meier & Martin, 1970), it was decided that a representative (but by no means exhaustive) annotated list of tests and procedures most frequently used for this purpose would be helpful.

I. INTELLIGENCE

A. Global

Stanford-Binet Intelligence Scale: Combined L and M Form: Third Revision. Houghton-Mifflin, 1960. Individually administered test of intelligence with IQ's for ages 2-0 through 18-0.

Wechsler Intelligence Scale for Children (WISC). Psychological Corp., 1949. Individually administered test of intelligence providing separate verbal and performance scores with norms for ages 5-0 and 15-0.

Wechsler Preschool and Primary Scale of Intelligence (WPPSI). Psychological Corp., 1967. Individually administered test of intelligence providing separate verbal and performance scores with norms for ages 4-0 to 6-6 (overlapping the WISC in the age range 5-0 to 6-6).

B. Verbal and/or Vocabulary

Peabody Picture Vocabulary Test (PPVT). American Guidance Service, 1959. Individually administered test of verbal intelligence estimated by measuring receptive vocabulary for ages 1-9 to 18-0.

Draw-A-Man Test. World Book Co. (Goodenough, Florence), 1926. Quick estimate of intelligence that can be used clinically to make assessments of personality and body image factors for ages 3-3 to 13-0.

Leiter International Performance Scale. Western Psychological Services, 1948. Individually administered non-verbal test of intelligence for ages 2-0 through adult.

II. PERCEPTUAL

Assessment of Perceptual Development (Martin, H.P., Gilfoyle, E.M., Fischer, H.L., & Grueter, B.B.). A.J. Occ. Therapy, 23:1-10, Sept.-Oct. 1969. This is an experimental version of an instrument which is individually administered to children 5-0 to 10-0 years of age.

Beery-Buktenica Visual-Motor Integration Test. Follett Publishing Co., 1967. Tests visual-motor integration through geometric form copying for ages 1-9 to 15-11 with separate norms for males and females.

Frostig Developmental Tests of Visual Perception. Consulting Psychologists Press, 1961. Test of visual perception including 4 subtests for ages 3-0 to 10+.

Bender Visual Motor Gestalt Test for Children. Western Psychological Services, 1962. Individually administered test of form copying with the score yielding both quantitative and qualitative assessment for ages 5-0 and 10-0.

Purdue Perceptual-Motor Survey. Charles E. Merrill (Roach, E.G. and Kephart, N.C.), 1966. Individually administered survey providing an indication of the child's level of perceptual-motor development recommended for grades 1 through 4.

Southern California Test Battery. Western Psychological Services (Ayres, J.), 1966. Performance test for children and adults with visual perception impairment with normative data provided for ages 3-0 to 10-0.

III. NEUROLOGICAL EVALUATION

Standardized Neurological Evaluation (Ozer, M.), 1966. Children's Hospital of D.C., Washington, D.C. A neurological examination standardized on children ranging from 4 to 10 years of age giving norms for each age group and a standard, machine-scored report form to insure uniformity of procedures and ratings of performance.

Neurological Evaluation (Rabe, E. in Paine, et al., Minimal Brain Dysfunction in Children, 1969, pp. 69-71). A neurological examination devised for children ranging in age from 3 to 12 years and containing modifications which are especially applicable to children suspected of having minimal brain dysfunction.

IV. PEDIATRIC EVALUATION

Youngster with learning disability: The physician's responsibility (Moe, P.). Handout for Pediatric Grand Rounds re: Learning Disability (12/18/70, University of Colorado Medical Center, Denver). Represents a synthesis of the best current approaches to the pediatrician's examination and related considerations in evaluating a learning disabled child.

V. ACADEMIC ACHIEVEMENT AND DIAGNOSTIC TESTS

Bobbs-Merrill Arithmetic Achievement Tests (revised). Bobbs-Merrill Co. (Baker, H.), 1967. Group test yielding three scores: 1) concepts

and problems; 2) computation; and 3) total. Two forms of each of 8 levels for grades 1 through 9.

Durrell Analysis of Reading Difficulty. Harcourt, Brace & World, 1955. Reading tests yielding an analysis at how the child reads and where he has difficulty for grades 1.5 to 6.5.

Durrell-Sullivan Reading Capacity and Achievement Tests. Harcourt, Brace, & World. Two parallel tests at each level reveal discrepancies between understanding of spoken language and understanding of the printed word for grades 2.5 to 6.0.

Gates-McKillop Reading Diagnostic Tests. Columbia Teachers College, 1962. Group test including word knowledge, comprehension, and language for grades 2 to 6; yields 28 scores on all phases of reading.

Spache Diagnostic Reading Scales. California Test Bureau, 1963. Battery of interdependent tests measuring specific components of reading ability from grades 1 to 8.

Stanford Achievement Test (1964 Revision). Harcourt, Brace & World (Kelley, T., Madden, R., Gardner, E., & Rudman, H.), 1964. Group test batteries in reading, spelling, arithmetic, language, social studies, and science. Separate batteries for each grade cluster ranging from grade 1 through 9.

Wide Range Achievement Test (revised edition). Psychological Corp. (Jastak, J. and Bijou, S.), 1965. Short test of oral word reading, spelling, and arithmetic achievement with norms from kindergarten through college.

VI. DIAGNOSTIC LANGUAGE AND CONCEPT FORMATION TESTS

Auditory Discrimination Test. Language Research Associates (Wepman, J.M.), 1958. Individually administered test of auditory discrimination ability for speech sounds in single words for ages 5-0 to 8-0. Requires concepts of same and different.

Illinois Test of Psycholinguistic Abilities. University of Illinois Press (Kirk, S.A. and McCarthy, J.J.), 1961. Individually administered test of language, including 12 subtests with language ages from 2-0 to 9-6.

Templin-Darley Screening and Diagnostic Tests for Articulation. Bureau of Educational Research and Service, 1960. Diagnostic and screening tests of articulation for ages 3-0 to 8-0.

Test of Concept Utilization. Western Psychological Corp., L.A., Calif. (Crager, R.L. & Spriggs, A.J.), 1970. Individually administered experimental test of the ability of children to use concepts in a meaningful manner; standardized on ages 5 thru 18.

The Basic Concept Inventory. Follet Publishing Co., Chicago (Engelmann, S.) 1968. This is an experimental version of an individually administered checklist of some of the basic concepts a child needs to know in order to understand explanations and instructions; it is primarily for use with culturally disadvantaged or mentally retarded children in preschool and kindergarten.

TV Test Battery (Meier, J.H.) in Hellmuth (Ed.) The Disadvantaged Child, Vol. I. Special Child Publications, Seattle, Washington, 1967, 173-199. Individually administered test battery for assessing concept formation and learning rate of children 4 to 12 years of age. Standardized materials presented on TV-like apparatus which can be programmed for various audio-visual content.

VII. READINESS AND SCREENING TESTS

Denver Developmental Screening Test (revised). University of Colorado Medical Center, Denver (Frankenburg, W., Dodds, J., and Fandal, A.), 1970. A screening test to determine gross developmental status in Language, Social, Perceptual-Motor and Physical functioning for ages birth to 4 years.

Learning Disabilities Screening Instrument. Univ. of Northern Colo.: Greeley (Cazier, V.O.), 1970. This manual was prepared as part of an independent study and portions of it served as integral parts of this ILDCSI Manual.

Scales of Mental and Motor Development. The Psychological Corp., N.Y. (Bayley, N.), 1969. This new test is divided into sections concerned with mental development and perceptual-motor development and is a well standardized instrument for accurately establishing the developmental status of a child 0 to 30 months of age.

VIII. SOCIAL COMPETENCE TEST

Vineland Social Maturity Scale, revised. Psychological Corp. (Doll, E.A.), 1953. Binet-type age scale designed to measure the successive stages of social competence from infancy to adult life.

VII. REMEDIAL AND PREVENTIVE TECHNIQUES RE: ILDCSI CATEGORIES.

REMEDIAL AND PREVENTIVE TECHNIQUES RE: ILDCSI CATEGORIES

Introduction:

In viewing the diagnostic approach to teaching children with learning and emotional problems, the classroom teacher needs to know how much a child can learn, under what circumstances, and with what materials to accomplish this. Educators should be well trained in using the various techniques of behavioral observation, informal testing, clinical test interpretation, prescriptive programming and teaching, behavior modification, and concise reporting (Giles, 1968). Teachers are professional people and are in a very real sense specialists in fitting educational experiences to specific kinds of children. Through observation and screening of children with learning disabilities, a teacher can find out what the child's abilities and disabilities are and then organize the educational program around this information (Dunn, Phelps, and Kirk, 1958). To encourage teachers to define their pupil's learning attributes, discover and develop their own teaching materials and activities, choose their own procedures and begin to execute a prescriptive program of education for the learning disabled child, the following remedial activities are offered as examples.

In most school systems, the classroom teacher is left to her own devices and must experiment with remedial techniques until she hits upon something that seems to work with the individual student (Davis, 1968). As the days go by, it becomes increasingly more difficult for teachers to "pull activities out of the blue" which will fit a child's specific learning needs. The following suggested activities, teaching methods, and preventive techniques should aid the teacher in this quest.

Before assigning a particular learning activity to a child, a teacher must observe the child and work with him individually for a short period of time. During this time, the teacher is able to structure the learning experience and make an accurate appraisal of the child's true potential to learn the given task, by illuminating exactly what the child can or cannot do. This knowledge prevents many frustrating experiences for both child and teacher. Learning disabilities are usually not reflected in a flat behavior profile. The child will have strong learning pathways, sometimes called open channels, as well as very weak learning pathways. There are several schools of thought regarding what is the most desirable teaching approach for these children. One idea is that in order to teach the child new information it is necessary to start with the strongest pathway. For example, children with auditory perception disorders usually can demonstrate more integrity of the visual channel than of the auditory channel. Perception is the meaning or interpretation the brain gives to what the sense organs tell it. Therefore, exponents of this school of thought would prexent visual stimulation first and follow with an auditory cue. A second idea would suggest that the teacher block the strongest pathway, the visual in this example, and introduce the stimuli from a more neutral pathway, say the tactile, then give the auditory cue. A third approach would be to block both the primary and secondary pathways and begin with the weakest, reinforce from the secondary and use the primary (or visual channel) for recall only.

It would appear that the teaching approach should be considered as individual as the child. If a child does not differentiate between sounds of letters, it is both impractical and harmful to begin remedial intervention by attempting to teach him words. In "starting where the child is" a teacher must alter the environment, the child, and/or the materials in whatever manner allows the child to make an easy, knowing response. This may necessitate structuring the environment by using specially designed furniture, using individual learning cubicals to block the visual field, using ear-plugs for the auditorially distractible child and removing them when you want him to listen, or rearranging the classroom to make it more conducive to the learning situation. Equipment such as walking beams, ladders, tires, hand bars, and stepping mats may enhance the learning of balance and coordinated movement which are prerequisites for the finer movements which may be important for learning certain skills. Teachers may need to prepare materials in special ways using raised surfaces and/or colors to exaggerate the contrast of the stimuli from its background. Spacing between letters and the use of a larger letter size also serves to make the visual stimuli more easily discernible.

Utilizing the services of teacher aides and student teachers will greatly support the teacher of children with learning disabilities. Most of these children have poor integrative or memory skills. They need constant monitoring by an adult until new patterns of memory become stabilized. The teaching assistants are also needed for making new materials, arranging the learning environment, and in supervising play activities. Having teacher aides to perform many of the non-teaching duties relieves the teacher, so that she may spend more time in observation and behavior modification techniques.

Operant conditioning has been shown to be an invaluable tool in more firmly establishing information and skills in the child's repertoire. With the operant approach, the starting point is to take an experimental analysis of the behavior that you want to change whether it is his aggressive behavior, his hyperactivity, his lack of speech. Having identified the category of behavior that requires modification, the next step is to make an antecedent-consequent analysis, i.e., determine what precedes the child's behavior and what immediately follows it. You identify the antecedents and consequences often enough so that definite patterns begin to appear. Having made this analysis and formulated some hypothesis as to what the reinforcement of behavior has been, the next step in the operant process is to alter the consequences. There are many aspects of behavior that you can alter radically and rapidly by administration of this procedure (Strother, 1966).

The behavior of a child with learning disorders of an organic nature is not only a function of the biological or chemical imbalance itself, but is also dependent upon the child's consequent psychological defense patterns and upon the environmental forces acting upon him. The biological disorder influences the child's psychological structure, its maturation, and its defense patterns, so that one must deal with interactions of the biological, psychological, and environmental forces, all of which need evaluation in understanding a child's behavior. A teacher must ascertain what maturational progress, physically, psychologically, and linguistically the child made before the biological disorder occurred or in spite of it. What is his true intellectual level and what environmental support does he receive?

The purpose of this section of the ILDCSI Manual is to suggest some activities and teaching techniques which will aid the child in developing adaptive responses rather than specific "splinter" skills or behaviors. Kephart (1968) suggests: "One of the primary symptoms, if not the primary one, of learning disorders is an interference with the process of integration. It would appear that the integrating process is one of the first to be disturbed when the neurological processes of the organism are interfered with. This disruption of integration is seen in response behavior and in the overt activities of the child. Thus, these children are poorly coordinated motorically, their motor responses are inaccurate and frequently distorted. The interference seems also to be present in perceptual activities. The child behaves as though his perceptual impression were disorganized." Kephart further states that the child with learning disabilities tends to attend to details and responds to minor items of instruction rather than to the total implications of the concept. "This child gives the impression that his world and his responses to it exist in bits and pieces with little connection between them, rather than in clusters of similar items held together in well-knit wholes."

Therefore, our task, as teachers of the child with learning disorders, is to aid the child in developing generalized behaviors so that he can progress through the sequential learning process as it is presented in school. Since the learning disabled child has great difficulty in varying his learning behaviors, the teacher must supply for the child the variations which he is unable to supply for himself. Since he cannot make generalizations through variation in performance, such variation must be made a part of the teaching function. Such variation in teaching requires ingenuity and creativity. A variation means a different way of doing a task. It is difficult for teachers to develop interesting and unique ways of teaching activities in a repetitive fashion. The teacher must learn to alter a procedure time after time in order to provide variation for the child. This child requires hundreds of alterations of a learning activity if he is to develop generalized concepts of learning. These variations must be spread widely over all types of learning activities and responses of the child. It is extremely important for teachers of children with learning disorders to be very creative and able to respond to individual differences in learners ("response-ability" in learning facilitation). The teachers must remind themselves repeatedly that they (the teachers) have intact learning systems. For them, information comes together in logical clusters. Perceptual associations are obvious and unquestioned. The teacher is capable of generalization and synthesis. What seems to the teacher to be a simple variation of a task, appears to the child as disconnected and unrelated. Care must be taken to help the child to shift with ease from task to task so there will be fewer abrupt changes in his learning situation. The teacher must be relaxed and flexible in attitude, ready to give up what appeared to be an excellent procedure and try something else at any moment. The teacher must continually help the child vary the learning task thus preventing him from developing perseverative solutions to problems based on high degrees of skill in rote memory activities.

Outline of Specific Remedial/Preventative Methods and Materials

The activities and teaching techniques written in this manual are but suggestions of possible ways to work with children with learning disorders.

Each child is different from every other learning disabled child. The teacher must constantly adapt the materials and methods to the unique behaviors of the child. The following activities are suggested as points of departure with the plea that revisions and modifications be made without reservation as the need arises.

The following activities are listed in abbreviated form in order to provide information at a glance. The activities are described fully in the books Aids to Psycholinguistic Teaching (Bush & Giles, 1969) and System for Open Learning: Facilitator's Handbook, Vol. II, Learning Episodes and Program Implementation (Meier, 1971). The cross-indexing of the ILDCSI with the Aids book provides the teacher with suggestions for variation of learning activities; the SOL, Vol. II, index is self-explanatory and cross-indexing with the ILDCSI does not seem necessary. After checking the behavioral characteristics of the child with the ILDCSI, the teacher may turn to this section of the manual and locate learning activities, teaching methods, and a list of published materials which have been known to be successful in aiding the learning disabled child in developing generalized concepts of learning.

The activities index is arranged in accordance with the ILDCSI categories as identified on the scoring keys and in the interpretive section of this manual. This should provide continuity and ease in providing variation of tasks that are not too different from one another.

A. High Risk Disability

The child who appears to be a "high risk" learning disabled child is one who has difficulty integrating information in all or in combinations of the sensory channels. In other words, he has difficulty using two or more learning channels simultaneously. He may be unable to look at a person's face while the person is telling him something. He learns to avoid over-loading the neurological system. This child will more likely function at the lower ranges of intelligence due to this generalized neurological dysfunction. Activities found throughout the Aids book should be helpful to the high risk child. The activities found in Chapter 12, Visual, Auditory, Tactile, and Kinesthetic Techniques should be used with caution with this child. Myklebust and others have warned against bombarding the "high risk" child with activities which tend to stimulate all systems at once. This could cause an overloaded neurological system which in turn might trigger hyperactivity or seizures in children who have this tendency. With a "high risk" child, the learning strengths of the child should be utilized at the outset. The teacher must provide activities which can be accomplished with ease and visible success by the child. After a positive self-concept has been achieved, fear of failure completely dispelled, and a relaxed, flexible attitude has been developed by the child, the teacher (learning facilitator) is ready to vary the activities little by little until the child is able to work for longer periods in his weaker channels. After this transition has been achieved, the teacher should provide activities which will integrate the visual with the auditory and tactile channels.

GENERAL PRINCIPLES OF REMEDIATION

1. Utilize learning strengths to remediate deficit areas.
2. Gradually move away from use of crutches and clues.
3. Insure success -- begin remediation on a level where the child can succeed, gradually increasing the difficulty and complexity of tasks.
4. Individualize the problem.
5. Teach to the level of involvement.
6. Structure.
7. Consistency.
8. Work from concrete to abstract.
9. Make sure the child always completes a task correctly.
10. Correct work as soon as possible after completion.
11. Do not expect miracles overnight.

The suggestions grouped under the headings of Neurological Involvement and Social Emotional Involvement will be particularly helpful to the "high risk" child.

B. Auditory Perception Disability

ILDCSI Item	Aids to Psycholinguistic Teaching
10	p. 2,3,11,65-66
11	p. 8,9,15,23,24,28,79
12	p. 10,11,23,24,29
13	p. 5,6,7,8,10
15	p. 167-173,72-73
16	p. 167-173,72-73
17	p. 165-173,8
50	p. 192,195
57	p. 173,6,11,15,24-35,30,47,59,62
58	p. 14-15
59	p. 68-69,70-72
60	all activities in this Section

RELATED MATERIALS

Peabody Language Dev. Kits - see above.

Understanding Self and Others

Perception of Sound Exercises Kit #9 MacAlaster Scientific Co.

Sounds I can Hear -- Scott, Foresman, and Co.

The A.D.D. Program I: Auditory Discrimination in Depth -- Teaching Resources, Inc.

C. Neurological Involvement

ILDCSI Item	Aids Book
18	Medical and Language
19	therapy needed
28	Neurological exam including EEG
29	MD
30	School phobia or illness?
31	p. 247-268
32	EEG needed
33	p. 247-268,115
36	p. 248-250
37	p. 248-250
38	p. 234,235,247,248,34,35
39	p. 248-250
41	p. 248-250
42	p. 220-224,265-266,39,232
43	p. 38,87,138,260,39,220
44	p. 38
45	p. 9-10,220,284,239
61	p. 122-135
62	p. 233,47
63	p. 20-21,195
64	p. 37-39,42-43,221,52,240
67	p. 218-220
69	Needs EEG
80	Use activities one channel at a time

RELATED MATERIALS

Perceptual Training Activities Handbook--Teachers' College Press, Columbia University

Association Picture Cards II and III, Color Association Picture Cards; Motor Expressive Language Picture Cards I and II; Sequential Picture Cards II and III--Developmental Learning Materials

D. Visual Acuity Disability

ILDCSI	Aids Book
1	p. 34 activity 2,6
2	p. 35 activity 12,13,14,15,16,17,18,19
3	p. 36 activity 1,2,3,20-22
4	p. 37 activity 5-7,1-5
5	p. 38 activity 9,bottom 1-2
6	p. 40 activity top 3-4,bottom 1-3
7	p. 41 activity 1-3
8	p. 42 activity bottom 1
9	p. 43 activity 2
10	p. 47 number activities

The following suggestions are presented to the regular classroom teacher who desires to make her classroom a place where visually impaired children will have the greatest opportunity to learn.[1]

1. When normally sighted children use pictures, provide the visually impaired with comparable experiences by letting them feel real objects or models.

2. Teach these visually impaired children how to learn efficiently and how to conserve their time, since the methods and materials they use to acquire information are often time consuming and cumbersome.

3. Emphasize the great need for planning ahead and orderliness.

4. It is most important to encourage students with any degree of vision to use their eyes, for unused vision is lost.

5. Try to let things remain where the visually impaired child leaves them, because he finds things by remembering where he put them.

6. Give specific directions that are meaningful when telling the visually impaired child where to put things, or when giving him other important instructions.

7. Verbalize your speaking on the chalkboard to illustrate or emphasize points, so that visually impaired students may follow the lesson.

RELATED MATERIALS

When increasing visual skills:

Frostig, M. and Horne, D. The Frostig Program for the Development of Visual Perception. Chicago: Follett Publishing Co., 1964.

Getman's chapters in Adolescents with Hidden Handicap, edited by Lauriel E. Anderson. California Association for Neurologically Handicapped Children, Los Angeles, 1970.

Woodcock, R.W. Peabody Rebus Reading Program. American Guidance Service, Inc., Circle Pines, Minnesota, 1967.

When teaching to strengths in auditory channels:

Lift Off to Reading. SRA, Chicago, Illinois,

Distar; Bereiter, C. and Engelmann, S. Teaching Disadvantaged Children in the Preschool. Englewood Cliffs, N.J.: Prentice Hall, 1966.

Initial Teaching Alphabet, Pittman, et al.

Linguistic Basal Readers. SRA, Chicago, Illinois.

---

[1]Alonso, Lou, "What the Classroom Teacher Can Do for the Child with Impaired Vision," National Educ. Ass'n. Journal, Vol. 56, Nov. 1967, pp. 42-43.

E. Visual Perception Disability

ILDCSI Items	Aids page	Activities
		For Language Arts Areas
14,33,46,48,49	p. 83	Visual symbols
51-56,60	p. 84-88	Perceptual training
	p. 90	Classify objects
	p. 92	Reading exercises
	p. 93	Classifying
	p. 95	Social studies games
	p. 96-71	Sequencing Visual Materials
	p. 98	Punctuation
	Aids book	For math remediation through the visual channels
	Visual Reception	
	p. 35	#13
	p. 361	#21
	p. 37	#2
	p. 38	#7
	p. 39	"Sequencing," #2 (bottom); Land 2 (top)
	p. 40	#4, #1
	p. 43	#2
	p. 47	"Number Activities" and "Time"
	p. 49	"Operational Perception-A Number Game"
	p. 50	#7, #10
	p. 51	"Techniques to Develop Sequencing Ability," #2 (top)
	p. 52	"Activities for Math Concepts," #1, #2 (bottom)
	p. 53	"Miscellaneous Activities," #5 (top); "Identifying Pictures Objects," #4
	p. 55	#4
	p. 45	"Different Percepts"
	Visual Association	
	p. 84	"Visual Relationships," #3 (bottom)
	p. 92	#4 (top); #5 (bottom)
	p. 93	"Classifying Pictures Visually," #1 (top)
	p. 94	"Sequencing," #5
	p. 97	#8,#9,#10
	p. 98	#1,#3,#9 (top)
	p. 99	"Sequencing," #1
	p. 102	#2; Also second paragraph: "Cut out triangles, circles, squares..."
	p. 103	#3 (bottom)
	p. 106	#3,#4 (top)
	p. 107	#4,#5

Fine Motor Development (For developing skills in writing, drawing, and cutting)

p. 34	#1,#3,#6,#21
p. 84	#3,#2,#4
p. 87	#1,#2
p. 138	#1,#2,#8,#10,#14
p. 218	Use of Hands, Hand Signals
p. 219	#1,#2
p. 220	#1,#2
p. 284	Writing
p. 37	#6,#7
p. 88	#1,#2,#3,#4,#5
p. 90	#1,#2,#3,#4,#5,#6
p. 222	#7,#13,#15,#16,#17
p. 94	#4,#6,#7
p. 225	#4,#6,#7
p. 230	#14
p. 257	Wrist Strengthening and Finger Strengthening Exercises

Gross Motor Development

p. 138	#2,#3
p. 139	#5
p. 139	#7
p. 141	#20
p. 143	#1,#2,#3,
p. 148	Follow the Leader
p. 218	#1
p. 249	#1,#2
p. 250	#3-13
p. 251	#14,#15
p. 251	#1-3 Head Exercises
p. 251	#1-3 Upper-back exercises
p. 252	#4-11 Upper-back exercises
p. 252	#1 Lower-back exercises
p. 253	Whole page
p. 254	Whole page
p. 254-5	#1-8
p. 255	#1-3
p. 256	Weight Lifting
p. 257	Finger Exercises
p. 258	Rope Jumps
p. 261	Walking Board
p. 261	Wooden Soldier
p. 262	#2
p. 272	#2
p. 272	#5

RELATED MATERIALS

Barsch, R.E. A Movigenic Curriculum. Madison: Bureau for Handicapped Children, Wisconsin State Department of Public Instruction Bulletin 25, 1965.

Fernald, G.M. Remedial Techniques in Basic School Subjects. New York: McGraw-Hill, 1943.

Frostig Program - see above.

Getman Chapters in Adolescent with Hidden Handicaps, CANIC, 1970, Los Angeles.

Gillingham, A. and Stillman, B. Remedial Training for Children with Specific Disability in Reading, Spelling, and Penmanship. Mass.: Educators Publishing Service, Inc., 1960.

Kephart, N.C. The Slow Learner in the Classroom. Columbus: Charles E. Merrill Books, Inc., 1960

McCall-Crabbs Test Lessons in Reading. Columbia Teachers College, Columbia University.

Myklebust, H.R. and Johnson, D.J. Learning Disabilities Educational Principles and Practices. New York: Grune and Stratton, 1967.

Valett, R.E. The Remediation of Learning Disabilities. Palo Alto, California: Fearon Publishers, 1967.

F. Spatial Orientation Disability

ILDCSI Item	Aids page	Activities
14,21,22,23,36	p. 33	
39,46,49	p. 34	
	p. 35	
	p. 36	
	p. 111	#4,#5,#7
	p. 114	#2,#3,#5
	p. 112	#10,#11,#13
	p. 115-118	All

(See items on Gross Motor and Fine Motor Sections)

RELATED MATERIALS

Kephart)
)
Frostig) See above.
)
Barsch)

Beery, K.E. Developmental Test of Visual-Motor Integration: Administration and Scoring Manual. Chicago: Follett Publishing Co., 1967.

Bender, L. A Visual Motor Gestalt Test and Its Clinical Use. New York: The American Orthopsychiatric Association, 1938.

G. Sequential Memory Disability

Auditory

ILDCSI Item	Aids page	Activities
11,12,20,23,58, 68	p. 2	#1
	p. 5	#1-8
	p. 8	#1-3
	p. 139	#10,#11,#12
	p. 140	#13
	p. 263-5	#1-11
	Auditory Sequential Memory	
	p. 192	"Numbering Sequencing," "Instruction Sequencing" (Cont. top p. 193)
	p. 194	"The Tape Recorder in Number Sequencing" (bottom p. 194)
	p. 195	"Sequencing" (bottom)
	p. 195	"Teach Rote counting by 1's, 2's, 5's, and 10's. And teach the days of the week, months of the year by oral repetition." (bottom)
	p. 196	"More Complicated Versions"
	p. 203	"Rhymes" (bottom)
	p. 204	"Repetition of Digits"
	p. 205	"Repetition of Sequence" (top)
	p. 206	"Dial-A-Phone"
	p. 209	#1b,c,and d
	p. 214	"Top Ten"

RELATED MATERIALS

Peabody Language Development Kits, Listen Skills - see above.

Records, rote games, rhythm games.

"Play It by Ear" -- Lovell and Stoner.

Visual

ILDCSI Item	Aids page	Activities
9,48,59,63,64, 68	p. 217	Visual memory
	p. 218	Arranging objects
	p. 219	Arranging pictures
	p. 219	Use of pencil and crayon
	p. 220	Use of letters and numbers
	p. 221	Play acting
	p. 222	Numbers and stories
	p. 223	Writing
	p. 224	Sequencing
	p. 225-30	3rd grade level activities
	p. 231-34	4th grade level activities

Visual Sequential Memory

p. 220	"Use of letters and numbers"
p. 221	#3 (top)
p. 222	#7
p. 223	#15,#17
p. 224	#23-25
p. 225	#6
p. 229	"n" (Coins)
p. 230	#14
p. 233	#9 (Drill in telling time)
p. 239	#11,#14,#15,#17
p. 240	"Join-the-Dots"
p. 241	#1
p. 242	#6
p. 243	#9,#10

RELATED MATERIALS

Frostig)
) See above.
Fernald)

Continental Press

H. Social Emotional Involvement

ILDCSI Item	Aids Book
24-27,34,35,40, 44,61,65,66,68,70, 71-80	Aids to Psycholinguistic Teaching is designed to raise the self concept of children with learning disorders. The total book is permeated with activities which provide children with success experiences which, in turn, helps to prevent emotional disturbances when this is considered secondary to the learning disability.

RELATED MATERIALS

Duso - "Understanding Self and Others" -- American Guidance Service.

Puppetry, Pantomine, Dramatics.

Written Composition.

Peabody Language Development Kits - See above.

Behavior Modification Techniques.

Hoffman Information Systems, 5623 Peck Road, Arcadia, California 91006.

FACILITATOR'S HANDBOOK II

EPISODES AND PROGRAM IMPLEMENTATION

FOR

S.O.L.

SYSTEM FOR OPEN LEARNING

BY

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HANDBOOK II. SOL EPISODES AND PROGRAM IMPLEMENTATION.

ACKNOWLEDGEMENTS.

SECTION I: UNITS OF SOL EPISODES - INTRODUCTION AND INDEX

Chapter A: Sensory-Motor

B: Linguistic-Interactional

C: Affective-Attitudinal

D: Cognitive-Perceptual

SECTION II: SOL CURRICULUM DEVELOPMENT AND EVALUATION

Chapter E: The Generation of a SOL Episode

F: Evaluation of Curriculum

SECTION III: PRACTICAL AIDS TO PROGRAM IMPLEMENTATION

Chapter G: Monitoring Learner Progress

H: Suggested SOL Environment Organization

SECTION IV: LIST OF BASIC SUPPLIES AND EQUIPMENT

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ACKNOWLEDGEMENTS REGARDING SOL HANDBOOK II

Although all of the direct quotations and many of the sections of this Handbook II are identified as to their origin in the usual literary form, there are several sources which warrant special mention.

Portions of Section I were developed through a grant from Title XI of the National Defense Education Act to explore Remote Microtraining of Early Childhood Educators under the direction of the author. Special thanks are due to Dr. Glen Nimnicht, Dr. Gerald Brudenell, Mr. Barry Barnes, Mrs. Oralie McAfee, and the many graduate students and early childhood education trainees for their contributions to these materials. Amended versions of parts of these materials have been published by the General Learning Corporation and by the Far West Laboratory for Educational Research and Development.

Most of Section I was produced through the auspices of grants from the Early Childhood Branch of the Bureau of Education Personnel Development. Miss Rita Stewart and Mrs. Pat Spitzmiller made very substantial contributions to this Section as curriculum writers on the EPDA grants. Extensive editorial and art work plus coordination of the several remote microtraining and field-test sites by William Borthick is also deeply appreciated, as well as the original SOL episodes from numerous participants in the training programs who are appropriately credited for their contributions in the text. The ready availability of an exemplary preschool laboratory under the able direction of Mrs. Joanne Mizner and Mrs. Margery Greenberg, permitting empirical testing of new curriculum right at the JFK Child Development Center, has been most convenient and appreciated. The cooperation and support of Dr. Ned Bryan, Grants Officer for the previous NDEA project and of Dr. Joan Duval, Grants Officer for the ongoing EPDA projects, which make much of this possible, is also gratefully acknowledged.

SOL HANDBOOK II

SECTION I - UNITS OF SOL EPISODES----INTRODUCTION AND INDEX.

The SOL Facilitator Handbook I, which contains the abstract and theoretical bases for this Handbook II, points out that learning is typically episodic in nature. This second volume of the SOL Handbooks, therefore, begins with a series of carefully developed and field-tested learning episodes which are compatible with the entire rationale for a System for Open Learning (SOL). Nevertheless, the following SOL Episodes are intended to serve primarily as fruitful points of departure from which the ingenious and responsible SOL Facilitator can create multiple variations on each theme. Although it is practically impossible to generate SOL episodes exclusively for any single dimension of a child's growth and development, the SOL episodes have been logically organized under four major chapter headings and subdivided into groups called Units. Cross-references are provided where overlaps occur with the secondary objectives on some learning episodes and the primary objectives of other SOL episodes. The chapters in Handbook II use capital letters for their designation, whereas the chapters in Handbook I use Arabic numbers in order to reduce the likelihood of confusion when references are cited between the two SOL Handbooks.

Chapter A is concerned with promoting the physical aspects of a young child's growth and development and is entitled Sensory-Motor; this includes the many elements of growth and development contained in the haptic or conative domains. Chapter B contains episodes which are primarily concerned with the social growth and development of the learner and is entitled Linguistic-Interactional. This seemed to be a logical place to include language because of its fundamental function for interpersonal

communication. Of course, as implied above, this in no way means that language does not cut across all of the other dimensions, for example a certain amount of motor development is prerequisite for articulating expressive speech.

Chapter C is addressed to the emotional aspects of a child's development. From the title, Affective-Attitudinal, it is apparent that this embraces not only feelings but also some of the factors involved in attitude formation, which in turn includes prejudice and related irrational inclinations.

The last chapter in this section is primarily concerned with the intellectual or mental growth and development of the young learner as is entitled Cognitive-Perceptual. This indicates that perception is herein treated as a mental process of attributing meaning to what is received through the sensory-motor system and is consequently more phenomenological than physical.

Since there is a large number of SOL episodes organized into somewhat cohesive units, an index is provided to make the selection and sequencing of these episodes a more convenient task for the SOL facilitator who is attempting to individualize instruction and learning experiences for each learner.

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INDEX FOR S O L UNITS AND EPISODES

Chapter A: Sensory-Motor

SOL UNIT 1 SENSES: HEARING

Episode A - Sound Cylinders
Episode B - Listening for Familiar Sounds
Episode C - Simon Says
Episode D - Sound Story
Episode E - Sound Hunt
Episode F - Listening Walk
Episode G - Auditory Games
Episode H - Loud-Quiet Scramble
Episode I - A Loud or Quiet Sound
Episode J - "Hummingbird"
Episode K - Auditory Memory Game
Episode L - Audio Taped Sounds
Episode M - The Buzzer Board

SOL UNIT 2 SENSES: SEEING

Episode A - Color Memory Game
Episode B - Visual Sequencing
Episode C - Repeating a Sequence
Episode D - Matching Two Identical Sequences
Episode E - Reproducing Designs (Templates, tracing, imitating, copying from memory)
Episode F - Reproducing Letters

SOL UNIT 3 SENSES: TASTING

Episode A - Taste-Identifying Fruit Juices
Episode B - Differentiating between "same" and "different" common foods, using the sense of taste.
Episode C - Combining taste/smell perceptions in identifying and naming familiar foods

SOL UNIT 4 SENSES: SMELLING

Episode A - Smell Identification of Different Aromatic Substances
Episode B - Using smell to sort and match "different" and "same" common food odors

SOL UNIT 5 SENSES: TOUCHING

Episode A - Drawstring Bag
Episode B - Feeling Materials
Episode C - Objects in Box: Child Identify by Touch
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SOL UNIT 6 GROSS MOTOR: LEGS

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Episode B - Imitating Movements with Music
Episode C - Policeman Game
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SOL UNIT 7 GROSS MOTOR: ARMS AND HANDS

Episode A - Exploring Movements
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Episode C - Imitating Movements with Music
Episode D - Picture Representations

SOL UNIT 8 FINE MOTOR: A DEVELOPMENTAL APPROACH TO FINGERPLAY

Episode A - Whole Arm Movements
Episode B - Palm and Wrist
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Episode D - Beginning Movements of Individual Fingers
Episode E - More Complicated Movements Using Individual Fingers

Chapter B: Linguistic-Interactional

SOL UNIT 9 LANGUAGE: RECEPTIVE-EXPRESSIVE DEVELOPMENT

Episode A - Verbalization of Motor Activities
Episode B - Verbalizing to Pictures
Episode C - Songs to Develop Language Skills
Episode D - Object in Box
Episode E - Verbal Expression
Episode F - Questions, Questions, Questions

SOL UNIT 10 LANGUAGE: ASSOCIATION

Episode A - Same Size As
Episode B - Not The Same Size As
Episode C - Different From (or Than)
Episode D - Same Size As and Different From (or Than)
Episode E - Opposing or Contrasting Conditions
Episode F - Opposing or Contrasting Locations
Episode G - "Apple"; Concrete, Semi-Concrete, Abstract
Episode H - Grouping
Episode I - Prepositions (up, down, top, bottom, half-way up, half-way down)
Episode J - Leo the Lion (words into action)
Episode K - Comprehension of Relative Position or Location
Episode L - Expression of Relative Position or Location
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SOL UNIT 11 LANGUAGE: PREREADING ACTIVITIES THROUGH COOKING

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Episode B - Green Salad
Episode C - Applesauce
Episode D - People Cookies
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SOL UNIT 12 TRANSITIONAL ACTIVITIES

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Episode B - Mr. Policeman, I Lost My Child
Episode C - If You're Happy and You Know It
Episode D - Names
Episode E - Transition Activities for 4 or 5 year olds
Episode F - Hacker, Packer Soda Cracker
Episode G - What Comes Next?
Episode H - Ten Little Indians

SOL UNIT 13 SOCIAL INTERACTION

Episode A - Cooperative Scribble
Episode B - Let's Have A Party

SOL UNIT 14 MUSICAL ACTIVITIES

Episode A - Sing The Colors
Episode B - Non-English Songs-Francais and Español

SOL UNIT 15 DANCE

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Episode B - Memory and Language
Episode C - "Do Your Own Thing"
Episode D - Rhythms
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Episode B - Chinese Cooking
Episode C - Chicano Cooking
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Episode B - Making Family Books
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SOL UNIT 19 EMOTIONAL DEVELOPMENT: FEAR (Fear of the Dark)

Episode A - "Bedtime for Frances"
Episode B - Story Completion
Episode C - "Cat At Night"

SOL UNIT 20 SELF IMAGE

Episode A - Mary Wore Her Red Dress
Episode B - Where Oh Where Is Dear Mario
Episode C - Bunny Blackears
Episode D - Make-A-Face Game
Episode E - Make-Believe Man
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SOL UNIT 21 DRAMATIC PLAY

Episode A - Role Play

Chpter D Cognitive-Perceptual

SOL UNIT 22 CONCEPT FORMATION: COLOR

Episode A - Exploration and Experimentation
Episode B - Visual Discrimination "Same Color"
Episode C - Saying Color Names
Episode D - No Visual Clues: Names of Colors Only

SOL UNIT 23 CONCEPT FORMATION: GEOMETRIC SHAPES

Episode A - Circular Objects
Episode B - Spot-Painted Circles and Semi-Circles
Episode C - Associating Name With Shape
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SOL UNIT 24 CONCEPT FORMATION: GEOMETRIC SHAPES AND COLORS

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Episode B - Eliminating Object Which Does Not Belong
Episode C - Labeling Objects According To Attributes
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SOL UNIT 25 CONCEPT FORMATION: RELATIONAL CONCEPTS-RELATIVE SIZE

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Episode B - Length Comparisons
Episode C - Height Comparisons
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Episode B - Cut-Out Numerals
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Episode D - One-To-One Relationship
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Episode B - Three-Dimensional Puzzles
Episode C - Difficult Two-Dimensional Puzzles
Episode D - Find The Missing Pieces
Episode E - Chalkboard Elimination Games
Episode F - Guessing Contents of Package
Episode G - Books For Problem-Solving
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SOL UNIT 30 CREATIVITY: ART ACTIVITIES FOR PRESCHOOLERS

Episode A - Modeling Media (Play Dough)
Episode B - Sculptured Medias (Wire and Box)
Episode C - Paste Collages
Episode D - Painting Activities (Tempera and Soap)
Episode E - Chalk and Crayon Activities

VIII. REFERENCES AND SELECTED BIBLIOGRAPHY.

SELECTED, CURRENT REFERENCES*:

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Follow-Up: Lest the child be referred for treatment which never gets implemented (paralysis of analysis), it is encumbent upon the professional to routinely make inquiries as to whether or not anything is being done and what the results are.